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THE  
SOUTHERN  
*GARDENER.*

OR

SHORT AND SIMPLE DIRECTIONS FOR THE CULTURE OF  
VEGETABLES AND FRUITS  
*AT THE SOUTH.*

BY DR. HENRY W. RAVENEL,

AIKEN, S. C.

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Dr. HENRY W. RAVENEL,

AIKEN, S. C.,

OR

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## P R E F A C E.

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The want of simple and easy directions for planting a garden is often felt by persons who are inexperienced, and do not know *what, when and how to plant*.

A good garden is a luxury as well as a necessity. Every one who has a small piece of ground idle, whether in the country or in a city, can furnish his table with vegetables all the year round. It only requires *good cultivation*, a knowledge of the *kind of vegetables* to be planted to advantage, and the *proper time and manner* of planting each kind.

The number or variety of kind which a family may need for their use, is not large, and, if the space is limited, should be confined to those only which are wanted most. A greater variety than is necessary only tends to distract the attention, cost more labor and occupies useless space.

The following short and easy directions are intended only for those in want of information, and makes no pretensions to be a substitute for the larger works on gardening. They are given as the result of observation and experience by the writer, and not a compilation from other sources; intended to be easily understood and easily put in practice. For having a daily supply of vegetables, it is not even necessary to plant all the kinds here enumerated. Selections can be made to suit the taste and inclination of each, or the capacity of the garden.

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# Vegetables all the Year Round.

JANUARY TO APRIL, INCLUSIVE.

PLANT.	JANUARY TO APRIL, INCLUSIVE.			
	JANUARY.	FEBRUARY.	MARCH.	APRIL.
Peas, Lettuce.	Ground Arti- choke, Green Glazed Cab- bage, Ruta Baga, Car- rots, Leeks, Collards, Spinach, Turnips, Parsnip, Salsify.	Peas, Lettuce, Beets, Irish Potatoes. Sow Leek Seed, Early York Cab- bages.	Ground Arti- choke, Green Glazed Cab- bage, Ruta Baga, Car- rots, Leeks, Collards, Spinach, Turnips, Parsnip, Salsify.	Lettuce, Peas, Pota- toes, Carrots, Cucumbers, Squash, Beets, Melons, Snap Beans, Corn Turnips, Kohl-Rabi.
				Drumhead Cabbage, Peppers, Sal- sify, Pota- toes, Corn, Potato Squash, Bush Squash, Beets, Car- rots, Snap Beans, Cucumbers, Tomatoes, Okra, Guinea Squash.
USE.	JANUARY TO APRIL, INCLUSIVE.			
	JANUARY.	FEBRUARY.	MARCH.	APRIL.
	Ground Arti- choke, Green Glazed Cab- bage, Ruta Baga, Car- rots, Leeks, Collards, Spinach, Turnips, Parsnip, Salsify.	Ground Arti- choke, Green Glazed Cab- bage, Ruta Baga, Car- rots, Leeks, Collards, Spinach, Turnips, Parsnip, Salsify.	Ground Arti- choke, Lettuce, Spinach, Asparagus, Cabbage, Carrots, Parsnip, Salsify.	Lettuce, Carrots, Asparagus, Cabbage, Spinach, Salsify, Peas.

NOTE.—Above the names of months are the vegetables to be planted, and beneath, are those which may be in season for use.

## VEGETABLES ALL THE YEAR ROUND.

FROM MAY TO AUGUST, INCLUSIVE.

PLANT.	Cucumbers, Beans, Okra, Melons, Tomatoes, Guinea Squash. Sow Green Glazed Cabbage.	Corn, Okra and Tomatoes for a succes- sion. Sow Collards and Green Glazed Cabbages.	Set out Leeks; plant Okra, Corn, Tomatoes. Sow Turnips, Ruta Baga, Kohl-Rabi, Mustard.	Turnips, Ruta Baga, Mustard, Kohl-Rabi. Corn not later than first week.
	MAY.	JUNE.	JULY.	AUGUST.
USE.	Peas, Asparagus, Snap Beans, Artichoke, Squashes, Potatoes, Lettuce, Turnips..	Beets, Potatoes, Peas, Squashes, Snap Beans, Cucumbers, Artichoke, Onion, Carrots, Okra.	Tomatoes, Okra, Squashes, Beets, Corn, Onions, Guinea Squash, Cucumbers, Snap Beans, Potatoes, Cabbage, Melons, Carrots.	Tomatoes, Okra, Sweet Potatoes, Guinea Squash, Sewee Beans, Snap Beans, Corn, Beets, Cucumbers, Cabbage, Potatoes, Melons.

NOTE.—Above the names of months are the vegetables to be planted, and beneath, are those which may be in season for use.



## VEGETABLES ALL THE YEAR ROUND.

FROM SEPTEMBER TO DECEMBER, INCLUSIVE.

PLANT.	Spinach end of month, Turnips, Ruta Baga, Mustard.	Sow Cabbage Seeds. Spinach, Mustard.	Spinach, Mustard. Set out Onions, and Globe Artichoke.	Spinach, Peas. Set out Onions.
	SEPTEMBER	OCTOBER.	NOVEMBER.	DECEMBER.
USE.	Tomatoes, Okra, Sweet Potatoes, Guinea Squash, Sewee Beans, Snap Beans, Corn, Beets, Cucumbers, Cabbage, Potatoes, Melons.	Tomatoes, Okra, Sweet Potatoes, Guinea Squash, Sewee Beans, Snap Beans, Corn, Beets, Cucumbers, Cabbage, Potatoes, Melons.	Ground Artichoke, Potato Squash, Parsnip, Salsify, Cabbage, Collards, Mustard, Turnips, Carrots.	Ground Artichoke, Leeks, Turnips, Cabbage, Collards, Mustard, Spinach, Parsnip, Carrots, Salsify.

NOTE.—Above the names of months are the vegetables to be planted, and beneath, are those which may be in season for use.

## TABULAR CALENDAR FOR THE GARDEN.

Suitable for the latitude of South Carolina and Georgia, showing the seasons for planting, and the seasons for using certain vegetables, so as to have a constant daily supply through the year.

VEGETABLES.	WHEN TO BE PLANTED.	WHEN FIT FOR USE.	REMARKS.
Asparagus	Once planted. per'n'l	March to May	Injures the bed to cut after May
Artichoke, globe	" "	April, May, June	Suckers, set out in Autumn
Artichoke, ground	Any time in winter	October to March	Good for the table and for pickling
Beans, snap	March to August	May to October	Plant at intervals for a succession
Beans, Sewee or Lima	March to May	Midsummer to frost	They may be put up for Winter use
Beets	February, March, April	May to September	May be planted in July for Winter
Cantaloupe	March, April, May	June to September	
Cabbage, green glazed	April, May	November to March	The seed must be pure to head
" summer varieties	Autumn or Spring	May and in midsummer	
Collards	April, May, June	August to March	{ Seeds sown in autumn, must be protected during Winter
Carrot	February, March, April	Midsum. to next Mar'h	
Cucumbers	March, April, May	May to September	
Guinea Squash	March, April, May	July to frost	
Kohl-Rabi	Spring and Summer	Midsum. to next Winter	
Leeks	{ Sow seeds in Feb., set out in June, July	November to April	To be earthen up as they grow
Lettuce	Jan., Feb., Mar'h, April	Mar., April, May, June	{ Cabbage lettuce is the best variety Make the ground extremely rich
Mustard	July to November	Following Winter	To be used as greens
Melons	March to June	July to September	

## TABULAR CALENDAR FOR THE GARDEN,

Suitable for the latitude of South Carolina and Georgia, showing the seasons for planting, and the seasons for using certain vegetables, so as to have a constant daily supply through the year.

VEGETABLES.	WHEN TO BE PLANTED.	WHEN FIT FOR USE.	REMARKS.
Onions *	(Sow seeds in March or plant young Onions in Nov., Jan., Feb.	Aug., Sep., October	{ Plants from seeds will keep through Winter, those from sets will not keep
Okra	March to June	June, July	
Peas	December to March	July to frost	{ Plant second crop in June for succession
Potatoes, Irish	February to April	April to June	{ Plant for a succession of crops Used green or ripe
Peppers	March, April	June to October	
Parsnips	March, April	Summer and Fall	{ Plant frequently for a succession May be planted in April for sum. crop Soil must be extremely rich
Radish	March to August	Following Winter	
Ruta Baga	July, August	April and thro' the sum.	{ Keep well through the Winter. Plant second crop not later than 1st July
Spinach	Sep., Oct., Nov., Dec.	Following Winter	
Squash, early	February to April	November to April	{
" Potato or Coosaw	April, May, June	May to August	
Salsify	March, April	Midsummer to frost	{
Turnips, Spring	February, March, April	Following Winter	
" Winter	July, August	May to July	{
Tomatoes	February to July	November to March	
		July to frost	



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# Southern Gardener's Manual.

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## GENERAL DIRECTIONS.

Almost any soil, not too low to be drained, can be used for a garden. The best soil is a proper intermixture of sand and clay, or what would be called a "loamy soil." If too stiff from excess of clay, the use of coarse composts frequently dug in, renders it loose and friable, and more easily worked. The coarse manures, (straw, leaves, &c.,) act mechanically at first in opening and loosening the close, compact soil, admitting warmth and moisture; and when in time they become decomposed, add to its fertility and absorbing powers. Light and sandy soils may be permanently improved by the addition of clay if it can be easily obtained, or by the use of gypsum, lime and ashes, incorporated with *well rotted composts*. All vegetable composts should be well decomposed before being used on light soils. In that state they improve the capacity of the soil for absorbing and retaining moisture. When applied in a coarse, undecomposed form, they tend to dry the soil still more, and act injuriously.

*Manure highly and dig deeply.* In this consists the secret of good gardening.

The *time of planting* and *mode of cultivation* of different vegetables are also important, as on these will depend the succession of useful vegetables in the garden. But all will fail without the essential of deep culture and heavy manuring.

### PREPARATION OF THE GROUND.

The most thorough and complete preparation is by *trenching*. When once done, it need not be repeated. Afterwards the soil is kept in good condition by deep ploughing, or spading, or digging, and turning in deeply with the hoe. As trenching is so important an operation, a few words of direction will be added. It loosens and pulverizes the soil for two or three feet deep (or as deep as the trenching is made), allowing a free percolation of superfluous water during heavy rains, and in times of drought affording a supply of moisture from below, thus neutralizing both extremes, and avoiding the two chief obstacles to successful culture.

The following diagram will explain the operation:

A	F	K	
B	G	L	
C	H	M	
D	I	N	
E	J	O	

Divide off the piece of ground to be trenched, so that the ditches or courses may be about 20 to 30 feet long. Commence to lay off the first course, say from A to F about 2 to  $2\frac{1}{2}$  feet wide, throwing the earth on the outside. When this course is finished to the proper depth (which may be from eighteen inches to two feet), then lay off another course, B G, of the same width, and throw the earth from this into the open ditch A F. In like manner, throw the earth from C H into the ditch B G. When the line is completed, there will be an open ditch at E J and a bank of earth outside of A F. Commence on the next line at J O, and throw the earth from this into the ditch E J, then the earth from I N into J O, &c. When this line is completed, the bank of earth outside of A F is thrown into the ditch F K, which finishes the two lines. By this process the trenching is carried on until the whole ground is done. If the subsoil is very inferior, or composed of gravel or pebbles, it is not advisable to have that on the surface for a garden soil. In such cases, the best plan is not to throw it out, but simply to break up well and leave it where it is. It is important in a garden to have a finely pulverized soil on the surface.

Different soils will require different depths of trenching, heavy stiff clay requiring the greatest

depth. The best rule is this: go to such a depth, that after the ground is levelled, there will not be more than six inches of poor subsoil on the surface. This surface soil should now be enriched with good compost manures, so as to have a continuous soil of good quality throughout. If the soil is stiff, a good plan is to have compost or even undecomposed leaves and straw from the woods to be incorporated as the trenching proceeds.

In the preparation of the ground for each separate crop of vegetables during the season, the soil should be well manured, and broken up deeply either with plough or spade.

## MANURES.

Those manures which are most accessible and cost the least should be used. There is nothing better for the garden than well decomposed stable compost, as it furnishes within itself nearly all the elements of plant food, and in a proper condition for immediate use. Peruvian Guano and the commercial fertilizers are also very excellent auxiliaries for keeping up the fertility of the soil, and for easy application and immediate results. They contain the chief elements of plant food, viz: Ammonia, Phosphoric Acid and Lime, and in a form to be readily assimilated by growing



plants, but a good garden soil needs also *humus*, or decomposed vegetable matter. This must be added by compost heaps, well rotted, and by turning under all weeds and decaying vegetation. All the ashes should be carefully saved, and with the sweepings of the fowl-yard added to the compost heap.

In the application of manures, so as to obtain the greatest results, some judgment and discrimination is necessary; our cultivated vegetables differ very much in the parts which are used as food. Some are planted for the leaves, as the Cabbage, Lettuce and Spinach; others for the root, as the Turnip, Beet, Carrot, &c., and others again for their fruit, as the Pea, Bean, Tomatoe, Okra, &c. It is a fact well known in vegetable Physiology, that excessive luxuriance tends to the development of stem and leaf formation; and that it is only when the luxuriance is somewhat checked, that flowers and fruit begin to form. As a general rule, therefore, the richest and most highly concentrated manures should be applied to those vegetables in which we wish to stimulate the leaf growth, whilst for the root crop and those which bear their fruit, we must use less of those stimulating compounds, and more of well decomposed vegetable matter with ashes and other mineral salts.

*Mulching* may properly be alluded to under the head of manures as a beneficial agent in promoting growth. It is so specially here at the South as a protection through our long hot and often dry summers. The growth of almost all our cultivated vegetables is promoted by mulching:

1st. It keeps the surface free from weeds and grass.

2d. It retains moisture in the soil for a longer time.

3d. It prevents the heating and baking of the surface and keeps it loose, cool and friable, thus encouraging the growth of the surface roots. Any refuse matter will answer for mulching, and when, in course of time, it rots, can be dug into the ground, and act beneficially as a manure.

### TRANSPLANTING.

This is such a frequent garden operation, that a few suggestions will be offered on the subject.

In transplanting trees or old plants, which have been some time in the ground and have acquired their natural position, it is always best to set them again at the same depth, but plants grown in a nursery bed from their crowded state, run up a long feeble stem, and when transplanted, should be covered deep enough to leave out only the crown or neck of the young shoot. If the stem

is too long, as it often is with Tomatoes, they may be slightly bent, and then covered so as to leave the growing point free. Clip off a few of the leaves and thus reduce the amount of evaporating surface, until the roots can begin to perform their proper functions. A protection of some kind for a few days from the sun, will increase the chances of success.

### SAVING OF SEEDS.

This is a part of gardening operation which is most generally neglected, and yet it is one which every good gardener should see to with great care. It is by selection of seeds from the best plants that all the improvement in gardening has been effected. By continuing to select year by year the seeds of those plants which have the peculiar qualities we wish to perpetuate, we may go on making improvements in all our vegetables, and thus obtain permanent varieties adapted to our wants and to the condition of soil and climate in which they arise. Besides the improvement that might be made by careful selection, every gardener should save his own seeds—1st, because it saves the expense of purchasing elsewhere; 2dly, it furnishes a supply on hand always ready for use, and 3dly, it ensures a good and genuine quality. There are some varieties of garden vegetables that do not mature their seeds well in our climate,

and of course, the above remarks do not apply to them.

Seeds should be saved from the healthiest and most vigorous plants, which have developed their valuable qualities in the greatest perfection. The fleshy or pulpy kinds like Tomatoes, Guinea Squash, &c., should be allowed to attain full maturity, and then macerated, and allowed to ferment for a day or two. This process clears the seeds of pulp and mucilage. The seeds of Peas, Beans and Turnips, should be well aired, and then corked down in close bottles to prevent the attack of insects.

The best Irish Potatoes now known, are those raised from seeds, by the late Chauncey E. Goodrich, of Utica, New York. He made this subject a speciality, and devoted himself to their perfection; and by careful cultivation and selection of the best kinds from many thousands of seedlings, has produced varieties better than any previously known.

The Irish Potatoe matures fruit with us rather sparingly, but almost every season, good healthy and well matured balls can be obtained to try the experiment of raising new varieties.

# Directions for Culture of Garden Vegetables.

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## ASPARAGUS.

For this favorite vegetable, a light friable soil is to be preferred. It is all important to prepare the ground well before planting, as the after culture must necessarily be more superficial. Spade or plough up deeply, or what is still better, trench the ground to the depth of two or three feet, incorporating good, well decomposed stable manure, ashes, salt and other fertilizers. They will repay in abundance and in size, all care expended in the preparation of the ground. Open trenches about three feet apart, eighteen inches wide and one foot deep. Into these trenches before planting, add more manure ; then set out the young plants about eighteen inches apart, carefully spreading out the roots and leaving the crown in its proper position above. This operation may be performed any time during the winter, but they should be in the ground by the end of January in this latitude.

If coarse straw or pine leaves can be easily got, a mulching of six inches deep on the bed (to be annually renewed) has been found very beneficial in keeping down weeds and grass, and keeping

the surface in a soft and friable state. If mulching is not used, the surface must be kept well cultivated through the season, and weeds and grass not allowed to grow. The young shoots come up feebly at first, but continue to throw up new shoots through the season, enlarging their growth and strengthening the underground stem. If under good cultivation, they will begin to furnish some shoots large enough for use the second year after planting.

Young plants may be obtained at the seed stores or may be raised, by saving seeds, in a nursery, and setting them out the following winter. They should not be cut later than the first week in May, so as to give time to the plants to strengthen their roots and form buds for another year.

The varieties known as *Giant Pimple* and *Canover's Colossal*, are considered the best.

## ARTICHOKE.

Two widely different vegetables are known under this name, viz: "*Globe or Burr*," and the "*Jerusalem*" Artichoke. The former is prized, for its fleshy, succulent and delicately flavored *flower bud*. These are planted either by seed or by offset suckers from old plants. Seeds may be sown in early spring in a nursery bed, and cultivated through the summer. In October or November, they should be transplanted into beds

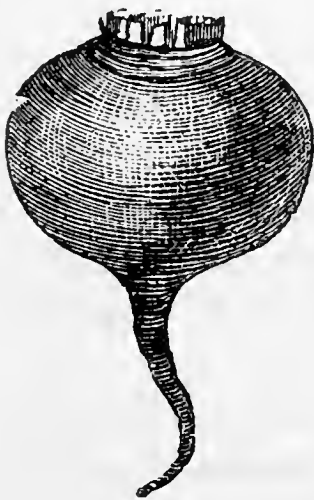
highly manured, and set in hills about three feet apart each way, putting two plants in each hill; or if from offsets, they should be taken from the old plants with as much root as possible, and planted in the same way and at the same time. By planting in early autumn, they acquire vigor enough to produce a crop the following spring. The summer culture is simply to keep down weeds. After the flowering season is over, the old stalks die down, and a new set of shoots spring up towards autumn from the roots. It is necessary to take off a portion of these suckers, in order to give more vigor and better fruit to the remaining stems. This dressing should be done in November, at which time manure should be dug around the hills. The best soil for the plant is a rich deep loam, not too dry. A heavy mulching is always beneficial. The best varieties are the "Large Globe" and the "French."

The "Jerusalem," or ground Artichoke, is an excellent vegetable for winter use. It produces so abundantly and gives so little trouble in cultivation, that it should have a place in every garden, even doing well in corners and waste places. The tubers may be left in the ground, and dug as they are wanted. They may be planted any time during the winter months, in rows about four feet apart, and two feet apart in the row.

## BEANS.

Bush or dwarf Beans may be planted early in March, about two or three inches apart, in drills two and a half feet wide. They grow rapidly and come forward among our early vegetables. They may be planted through the summer for a succession. Pole Beans will continue in bearing for a longer time, and they do better on a more moist soil. The Lima and Sewee Beans, are planted in early summer, but do not come well into bearing before fall. They also require rich, deep and somewhat damp soil, and a good support for the vines to run freely upon. If the vines are forced, from want of support, to fall over upon each other, the bearing is arrested.

## BEETS.



The Turnip rooted varieties are generally the earliest, and do better in our latitude than the long blood Beet. The ground for this favorite vegetable, should be in the best possible condition. Manure with rich, well decomposed compost, spade deeply and incorporate thoroughly the manure, and have the soil well pul-



verized. The drills should then be laid off about one foot and a half wide. Sow in these about one inch deep and cover lightly. A small quantity of guano or some other fertilizer sown in the trench, will give the young plants a better start, and the seeds should be sowed from middle of February to end of March. If planted later, there is danger of their being killed by the hot sun of April and May. When the plants are about three or four inches high, (or later, if the cut worms are destroying them,) thin out to a single plant about nine inches apart. Beets are also much improved by a mulching between the rows. If cultivated without mulching, be careful not to draw up earth around the roots, but leave the surface level and clean of grass and weeds by frequent stirring.

## CABBAGE.

This vegetable requires a deep rich soil, and for the summer varieties, one rather moist. The ground should be made excessively rich by the free use of the best and strongest manures, as we wish to stimulate the leaf growth to the highest point. Without this luxuriant growth, there is no "heading."

For early varieties, *Early York*, *Early Sugar Loaf* and *Early Drumhead*, are esteemed the best. The seeds should be sown in the nursery bed in

early autumn, and kept somewhat protected during the winter months, (or the seeds may be sown in early spring;) to be planted out as soon as the greatest colds of winter are over. These will head during the spring. For summer or fall use, the *Drumhead* and *Savoy* Cabbage, may be sown in spring and the plants set out as soon as they are large enough. The best winter Cabbage in our latitude, is the *Green Glazed*, as it withstands best the attacks of worms and the aphides. The seeds are sown in May or June, and the plants set out as soon as they are large enough and cultivated through the summer. They should be fit for use during the winter months.

*Collards* make excellent "greens" for fall and winter use. They do not head, but throw out large and succulent leaves, which are delicate and tender. From their rapid growth and hardy habit, the collard is a favorite vegetable throughout the country. The seeds should be sown during the summer, either in the nursery or where they are to stand, and the cultivation is like that of the other varieties.

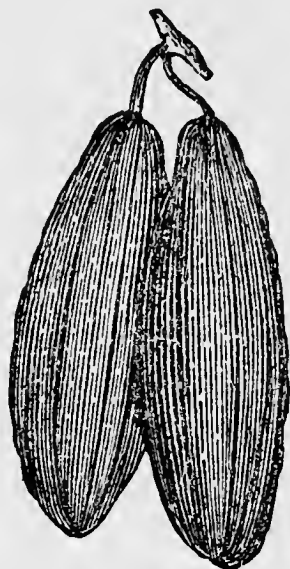
## CARROT.

The directions for Carrot, are similar to those for the Beet. The seeds must be sown from February to April, so as to avoid the heat of later spring.

The *Early Horn* is the best early variety. The *Long Orange* and *Altringham*, are later, and may be kept over for the following winter.

## CUCUMBER.

This, like all the melon family, wants a quantity of well rotted manures about the roots. They may be planted in hills about five or six feet square, first opening a hole and digging in one or two baskets of compost. When about to commence running, thin out to two vines. As they are very easily checked in their growth and bearing by dry weather, a good mode of cultivation is to prepare the hills for planting, by taking a circle, say four to six feet in diameter; manure well, and then mulch to the depth of six inches with partially decomposed compost or stable manure. On the outside of the circle, and touching the mulch, plant the seeds at intervals of two feet apart. The roots pass under the straw and are protected from the heat of the sun, whilst they are more easily watered, and the mulch retains the moisture for a longer time. For obtaining very early Cucumbers, the seeds may be planted in small flower pots, as early as January, and kept



within doors when the weather is too cold. Be careful in transplanting to take out the whole ball of earth surrounding the roots, and they grow off without injury. In open air culture, it is not safe to plant before first of March. There are many varieties now offered for sale, among which the *Early Cluster*, *Early Frame* and *White Spine* are perhaps the best.

### EGG PLANT, OR GUINEA SQUASH.

Sow seeds in a hot bed or box, in February or March, or if in the open air, not before April. They require a good degree of heat to germinate, and grow slowly at first and must be kept from cold exposures. When three or four inches high, transplant into well manured ground, about two and a half feet apart, and water freely during dry weather.

*Early Long Purple* and *New York Improved*, with some large white fruited and scarlet fruited varieties are in cultivation. The purple fruited, are mostly preferred for the table.

### KOHL-RABI, OR TURNIP-ROOTED CABBAGE.

This vegetable as its name implies, partakes in flavor of both the Cabbage and Turnip, but more delicate than either. For spring and summer crop,

sow seeds in early spring, either in a nursery to be transplanted, or on the bed where they are to stand, in drills eighteen inches apart and about one foot in the drill. For fall and winter use, sow like the Turnip, about August, in well prepared land. The culture is similar to that of the turnip, taking care not to draw too much earth to the thickened stems.

### LEEK.

Sow seeds in February in a nursery row, and in June or July, transplant to bed. Prepare the ground by opening trenches two or three inches deep, about two feet apart. Into these trenches dig in a quantity of well decomposed compost or any other rich manure. Set the young plants deeply in the trenches, first cutting off the weak upper leaves, and water freely. As they grow, draw in the earth, until at the end of the season, the earth may stand in a ridge about the plants. It is also recommended to cut or pinch off the tops occasionally, to give more size to the stem. The long, blanched, thickened stems are then fit for use the following winter. This is a biennial, and some of the best plants must be left to run to seed in the spring.

## LETTUCE.

There are many varieties of Lettuce, but the two principal divisions are, those with spreading, roundish leaves, which generally form good heads, and those with upright oblong leaves, which require to be tied up to blanch their leaves. The *Cabbage Lettuce* is the type of the former, and the *Cos* and its varieties, of the latter. Both divisions contain good kinds, and it is only a matter of taste between the two. The *Cabbage Lettuce* is generally more highly flavored, but the *Cos*, more crisp and tender.

The Lettuce is a half hardy plant, and under a slight shelter may be headed during the winter months. For this purpose, the seeds should be sown in September and October.

For spring use, sow in January, and successively once a month until May. If sown later, they soon run to seed and are injured by the hot sun.

This like the *Cabbage* and other leafy plants, requires the richest of soil. To have good, tender and well headed Lettuce, plant only a small piece at a time, and make that as rich as a manure heap. Sow the seeds in drills about one foot apart, covering lightly. As soon as the young plants show two or three leaves, begin to thin out, repeating the operation as often as they become crowded, until, at the final thinning, the plants

should stand about ten or twelve inches apart. A light mulching of clean straw may be put between the rows to keep the leaves free of sand.

To ensure good seed for another year, leave two or three of the finest heads of the early crop to run to seed.

## MELONS AND CANTALOUPE.

These are so generally cultivated, that it is scarcely necessary to give any directions—especially as each one thinks his own plan the best. All agree, however, in this that they require rich manure applied in the hills, and that the ground be kept clear of grass and weeds when the vines begin to run.

## MUSTARD.

This is planted for the leaves as well as the seeds. If sown on rich soil in October, they grow through the winter and make very good “greens,” when nothing better can be had from the garden.

## ONION.

There are two modes of planting this vegetable, one by *seeds* and the other by *sets*. If it is desired to have them early and of large size, the sets must be planted in the fall or winter months.

November is about the best month. Prepare the land by a good application of well rotted manure, and lay off shallow drills about one foot apart, putting in the sets about six inches in the drill, by simply pressing them into the loose earth. The Onion being a biennial, and the sets having grown partly through one season, many will be disposed to run to seed. They should be watched, and as soon as the flower bud appears, it should be pinched off. If there is much luxuriance in the leaves, as light bruising or trampling upon them, arrests this overgrowth of leaf, and causes the bulb to enlarge. In the cultivation, never draw up earth around the bulb, but keep the surface level. The bulb is only the enlarged stem, and if covered, it ceases to grow. By sowing seeds in early spring, in drills one foot wide, and cultivating in similar manner, leaving single plant about six inches apart in the drill, the bulbs come in later in the season, but keep better for winter use. The white and red Onion are both well adapted to our climate, and of these, there are several varieties.

### OKRA.

This universal favorite has generally a place in every Southern garden. The two varieties most usually planted, are the *Dwarf*, with large leaves,



short jointed stems and short thick pods ; and the long green or *Lady's Finger* with more dissected leaves, a longer jointed stem, and long tapering fruit. From frequent trials, we prefer the latter. Plant in rows about first of April, three feet apart and about twelve to fourteen inches in the row, thinning out to a single plant when large enough. Should they begin to fail towards mid-summer, draw away the earth and apply well decomposed compost or fertilizers near the roots, and then draw back the earth. This stirring of the ground, together with the manure, gives them a new growth, and they continue in bearing until frost. A few good plants should be reserved for seed, so as to secure a good, healthy seed for another year.

### PARSLEY.

This favorite seasoning herb should have a place in every garden. It requires a rich, moist and rather shaded situation. After becoming established in a favorable spot, they renew themselves annually from their own seeds, with but little help in keeping out weeds and grass.

### PARSNIP.

This vegetable, in order to come to perfection, requires a rich, deep soil, which has been enriched by previous manuring. Guano or some of the

fertilizers may be added, but too much compost is apt to cause *forking* of the roots. Sow seeds in early spring in drills, about eighteen inches apart, and when the plants are large enough, thin out to one foot apart.

## PEAS.

Of the great number of varieties of this favorite garden vegetable, it is difficult to make a selection which will suit every one. They are all improved varieties, with certain good qualities. The early Dwarfs will recommend themselves to those who want the earliest crop, and without the trouble of sticking. Of the larger and later varieties, there are always a number to select from, with flavors and tastes to suit all parties. In our latitude we can have Peas planted in November, and exposed to our winter cold, but the risk is in the spring frosts, which easily kill them when in bloom. The safest time for planting, is soon after Christmas, and then for a succession every month until May. The Peas do not need as highly stimulating manures, as some other garden vegetables, but the compost should be thoroughly decomposed. A very good preparation, is to turn under a quantity of grass, weeds, or refuse vegetation in autumn, and have it well rotted before planting time. Sow in drills from two to four feet apart,

varying according to the size of the vine. The sticks or supports should always be high enough to encourage the growth of the vine to its utmost length, as it bears much better and longer when well supported. All the varieties of Peas and Beans do better when they can run freely and the vines not forced to bend downward or interlace each other. To use this vegetable in perfection, the pods should be gathered before they become quite full grown.

### PEPPERS.

Of these, the best for table use, are the *Cayenne* and *the long red pod*. The *Bell Pepper* is used for pickling, and the *Cherry Pepper* in the fresh state, as a condiment to soup. Sow in seed bed in early spring, and transplant when large enough. The *Cherry Pepper* with a slight covering over the roots, will survive the winter.

### POTATOES—IRISH.

New and improved varieties of Potatoes from seedlings, are brought to public notice every year. Many of these are really valuable. Others only puffed for speculating purposes. Even among those of real value which originate in the Northern States or in Europe, some caution is necessary in recommending them for Southern culture with-

out trial. Many varieties which are productive in a more Northern climate, fail to do well here. We should turn our attention to the raising of new varieties from the seed, and thus obtain such kinds as are best adapted to the climate.

The Potatoe thrives best on fresh lands, or in which there is much vegetable matter. The best manure, therefore, will be thoroughly decomposed compost, scrapings from the woods, leaf mould &c., with an addition of guano, gypsum or ashes. For garden culture, when leaves or straw can be readily obtained, the best plan is to mulch. Prepare well the ground by digging or ploughing deeply, then lay off trenches about two feet apart, and a few inches deep. Into these trenches, dig in the compost and other manures, incorporating them well. The Potatoes are planted about one foot apart in the trenches, and the ground leveled. It is best to delay mulching until the plants are about six inches high, as they come up more regularly, and are less easily killed by the spring frosts, than when coming through the mulch. Spread the mulch regularly over the whole surface, (taking care not to injure the young vines,) so thickly as to keep down weeds and grass. The advantages of this plan, are 1st, that it keeps the ground beneath cool and moist; 2dly, it prevents weeds and grass from growing and saves the

trouble of further cultivation, and 3dly, the larger tubers may be taken out without injury to the vines, and the smaller left to grow. In this way, the bed may be searched over several times in the course of the summer.

If planted without mulching, the trenches should be about three feet apart, and the plants about one foot or eighteen inches in the trench. The after cultivation is merely to keep down grass, and the ground well stirred about the plants. A light ridge may be drawn to the vines, but it is not essential. The Potatoe though ranked among the more hardy vegetables, is often killed by spring frosts, and more especially when they have grown through the mulch of straw. If planted early, the pieces should have at least two or three buds, but if later in the season, one bud is sufficient.

### RADISH.

This old fashioned vegetable is still in favor with some, and is very easily raised. To have good Radishes, the growth should be forced rapidly, and for that purpose have the ground very rich. Plant but a little at one time, and renew the planting once a month during the spring and summer, as long as they are wanted for a succession; and they are fit for the table in four or five weeks after the seeds are sown.

## SALSIFY, OR VEGETABLE OYSTER.

Plant as for Beets and Carrots, in deep mellow earth, in March or April, and cultivate as usual. The roots will be fit for use the following autumn and winter.

## SPINACH.

This vegetable we cannot have here at the South in perfection, during the warm months of spring and summer, as they have further North. It runs to seed rapidly in warm weather, and the young plants are apt to be killed by excessive heat.

The earliest month for safe planting is October, or the latter half of September. As for all other leafy vegetables, the soil should be excessively rich, so as to promote a rapid, luxuriant and succulent growth. A small bed made very rich, will furnish more leaves, and of better quality than one double the size on poorer land. Both the round and prickly seeded varieties are used. Sow in drills about eighteen inches apart, covering lightly; and if the stand is too thick, they should be thinned out about six inches in the drill.

## SQUASH.

The Squashes most generally cultivated at the South, are the "Bush Squash" and its varieties, which ripen in Spring and early Summer. They are only fit for use when young and tender. The famous Fall and Winter Squashes of the North, such as Boston Marrow, Hubbard, Yokohama, &c., belong rather to the pumpkin family.

The former should be planted as early in Spring as is safe, and may be put in the ground as early as February, if some precautions are taken to give a slight protection on frosty nights after they come up. They should be planted on well manured hills about four feet square. A very good plan to adopt for early planting is as follows: After digging in and incorporating the manure, throw up large ridges or beds the whole extent of the ground to be planted, and about four feet apart. These beds should run East and West. On the South side, at intervals of four feet, chop down through the centre of the ridge and draw the earth into the alley. Trim down the sides and back, giving them a pressure with the back



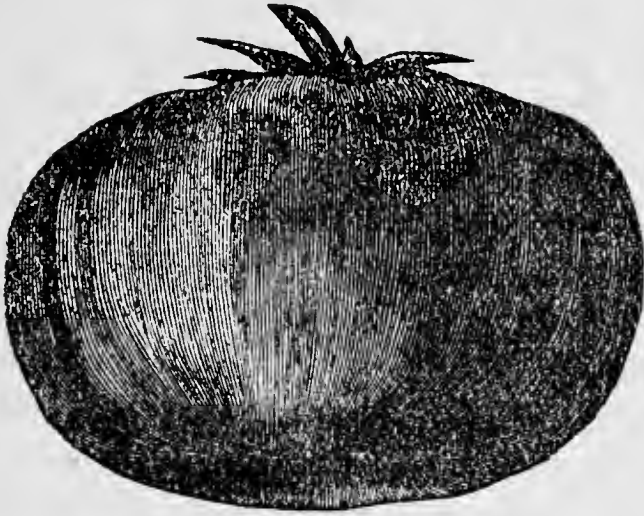
of the hoe, just so steep as to avoid being washed down. In this protected corner, the seeds are planted. By this earthy screen, the young plants are protected from cold winds, and gain more warmth from the reflected heat, besides being more sheltered from frosts. If the weather is severe, any kind of covering thrown over will keep them from being killed. This mode of protection may be adopted for Melons, Cucumbers and many other vegetables. In the low country, along the coast, where the long moss can be obtained, there is no better protection for young plants, as being a living plant itself, it tends to keep off the extremes of temperature.

The Winter Squashes should not be planted before July or August. They do best towards Autumn, and should be planted just so early as to ripen their fruit before frost. We have found the "Potatoe Squash" and the "Yokohama," do very well in our latitude. They keep well and are excellent for the table.

These are running vines, and must have more room than the early Squashes. The hills should not be nearer than eight or ten feet square.



## TOMATOES.



The mania for "new varieties" every season, is the best proof of its being an unusual favorite, North as well as South. There is actually but little difference between any of the really improved kinds. The great objects sought for in improving the seeds, are to have them early in maturing, prolific in bearing, free of lobes and folds, and with firm, solid flesh. By a judicious selection of seed year after year, under the stimulus of profit, the Tomatoe has certainly been much improved of late. We do not recommend specially any named variety, as they all have some good qualities, and there is too little difference to give them any special characteristics. We would recommend that all who wish to improve their

Tomatoes, and preserve their good qualities, should pay attention to saving of seeds from the best fruit and healthy prolific vines. This will ensure good seed much better than trusting to get them elsewhere. Let the fruit be thoroughly ripe, and, after maceration, allow the pulp to ferment for a day or two, and the seeds will be left clean of mucilage. For an early crop, sow seeds in February, in a hot bed or box, and when large enough, transplant to well prepared ground, in rows about three feet square. They may be supported by brush between the rows, or by poles lodged upon forked stakes. If allowed to fall on the ground, it is more difficult to give them clean cultivation, and the fruit is often injured by contact with the damp grass and earth; but the vines generally strike root where they lodge, and in this way often go on bearing a longer time.

The early Spring planting cannot be relied on for a continuous supply through the season, and those who wish to have them all Summer, must plant a second crop, sowing seeds from middle to end of June. These will come into bearing during the month of September and continue to frost. To have them still later, pick in carefully all the fruit, both ripe and green, from the vine, just before a killing frost is expected, and spread them out in some cellar or room protected from the

weather. They will go on ripening and those that are ripe, will keep well for several weeks in cold weather. We have usually kept them well to 1st of January, and even later, in this way.

## TURNIPS.

The Turnip, like many other vegetables, has some of its numerous varieties, more or less adapted to certain seasons of the year, and certain ranges of climate. For Spring planting, the *Early Flat Dutch* and the *Red Top*, are perhaps the best for our latitude. The seeds may be sown from middle of February to end of March, and the crop be fit for use by 1st of May.

For the main Winter crop, we have found none to excel a Southern variety known as "Johnny Reb." They are not injured by excessive freezing; grow to a fair size, and of the best flavor. They also seed freely in our climate. For an early supply from faster growing varieties, we have found the large *White Globe*, the *Long White* or *Cow's Horn* and some others to do well, but they do not keep so well during the Winter.

The *Ruta Baga* variety is a general favorite, and on deep rich soil, makes a large root. By drawing up earth around the crown of the roots during very cold weather, they keep well in the ground all Winter.

No garden crop will repay more profitably, the best preparation of the ground and high manuring than the Turnip. Deep culture is necessary, and a thorough pulverizing of the soil. Sow in drills from end of July to end of August, (later than September scarcely gives them time enough to form good roots.) The drills should be opened very lightly, and after sowing, rake lightly and press down the earth on the seeds. Heavy covering destroys more seeds than any other cause. A top dressing of Guano or some of the Phosphate Fertilizers in the drills, at the time of seed sowing, will push the young plants forward very rapidly.

# Southern Fruit Culture.

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More attention is now paid to the cultivation of fruit at the South than formerly, but it is yet too much neglected, both as a branch of profitable industry, and as furnishing a cheap, abundant, wholesome and palatable luxury. On the free use of good fruit in the warm seasons of the year, the principles of Hygiene and Health agree with our natural inclinations and appetites; and Nature, always bountiful and provident in her gifts, has furnished us with a great variety of the finest fruits of the temperate zone.

We propose to give a few simple directions for the culture of those in most general use.

## THE PEACH.

This fruit stands forth preëminently as the finest we cultivate at the South, taking into account the perfection it attains, its rapid growth and early bearing, and its hardiness adapting it to almost any kind of soil.

Large quantities are now exported to the Northern markets, where they have a monopoly of some

six or seven weeks before the Delaware and Western crop is ripe. To one who is about to embark in this business, a few words of caution and advice are necessary, and we will first speak of the

### Large Orchard for the Northern Market.

In selecting a proper location, there are several important conditions to be considered, viz: Is the soil suitable? Is there reasonable exemption from spring frosts? Are there facilities for reaching a market? If these conditions are all favorable, the business may be considered profitable.

1st. *Soil and situation.* Almost any soil, not too stiff or wet, nor on the other hand, too poor and dry, will suit the Peach. Too rich or too damp a soil causes disease in the fruit; too poor a soil will give healthy and well colored fruit, but wanting in size, flavor and abundance. The best soil is a moderately fertile, light, friable loam, with porous subsoil, well drained. Freshly cleaned lands are better than old fields, and an old orchard should never be replanted until it has had time to recuperate.

2. *Climate and liability to Spring frosts.* This is an important consideration which is often overlooked. The chief danger to the crop is from late spring frosts, which find the trees in bloom or

young fruit. The liability to frosts varies very much in different localities, even in the same neighborhood. The high ridge lands which slope off gently are the safest; flats and valley lands should be avoided. The cause of this is dependant upon well known meteorological laws, and the fact is well known by every observant farmer.

3. *Facilities for reaching a market.* In estimating the probable profits of an orchard, this is also an important point. The *cost* of transportation, the *time* occupied, and the *changes* from one mode of conveyance to another, requiring frequent handling of the packages, must all be considered. Water transportation is better than railroad, and the less the packages are handled the better. The *free-stone* Peaches, if picked as soon as they attain full size and color, even though hard and unripe, will continue to become mellow, and keep for at least a week if not bruised. The *cling-stone* ripens but little, and rather becomes shrivelled. For a distant market, therefore, the former are preferable.

## SELECTION OF TREES.

Young trees are always to be preferred, one year old from the bud. In planting an orchard, whether on a large scale for sale of fruit, or only for home use, it is best to have budded or grafted trees. There are many reasons for this.

*First, it ensures good fruit.* None but the very best varieties of fruit are cultivated by the nurserymen, who make this their business. They are always on the look-out for the best and most valuable kinds, and discard all that are worthless.

*Secondly.* When there is a large orchard, it insures uniformity of ripening, and thus saves the trouble of hunting up the ripe fruit and loss of time. All the trees of one variety are put together and they mature together. The arrangement of the orchard should be such as to place in proximity those kinds which ripen in succession, so that there is never any trouble or loss of time in searching for the ripe fruit. As it is all important to have the earliest fruit in the market, of course a large proportion of the early varieties should be selected. The nursery catalogues have a large number of choice varieties, which will give a succession from middle of June to November, but as the Delaware and Jersey fruit begins to ripen early in August, it is best to have varieties which ripen before that time. For home use, a selection may be made to continue through the rest of the season. Hales' Early, Tillottson, Troth, Amelia and Crawford's Early, are general favorites as earliest kinds. These follow in succession, Alberge, Large Early York, Crawford's Late, Pays, and some other equally good varieties. This succes-



sion will last until about the beginning of August. In determining the relative proportion of each kind to be planted, due regard must be had to the facilities for sending them off to market, and for gathering, packing and hauling. In the selection of the best kinds, whether for marketing or for home use, we would advise those who are ignorant or indifferent about the matter, to leave it with the nurseryman with whom they deal. Avoid purchasing from tree-peddlers or unreliable men, they have nothing at stake and may deceive. The nurseryman, like all other honest men, wishes to promote his business, and is well informed as to the qualities and adaptation of the different varieties.

## PLANTING OF THE ORCHARD.

The ground should be thoroughly broken up by the plough, (deeper the better,) and then checked off by single furrows twenty feet square. At the intersection of these furrows, holes about three feet wide and eighteen inches deep should be opened, the surface earth thrown on one side and the subsoil on the other. In covering, draw in the surface soil first around the roots, leaving the poorer subsoil for the surface. Plant no deeper than they stood before being removed. A slight mound may be drawn around the stem to keep

the young trees steady, which can be levelled in the fall. The roots must be well spread out, first removing the bruised or broken portions, and the earth well packed in and around the roots. If the soil is light, add some kind of fertilizer or well rotted compost in the hole. Previous to planting, the young trees should be cut back to about two feet in length, as they are received from the nursery with their full Summer's growth. This is done to insure a vigorous growth, and to form the new head of branches about two feet from the ground. It is necessary in our climate that all fruit trees should branch low, to protect the trunk from the direct rays of the sun. If more than four buds start, rub off the others, leaving only four of the best near the top. In the following winter, these leading shoots must be cut back, leaving not more than two or three buds on each, and in each succeeding year a portion of the branches must be taken off, to keep the tree in shape and vigor and to add to its productiveness. If branches are allowed to grow without annual pruning, they soon lose their proper shape, and form long willow limbs, bearing leaves and fruit only at the extremities. For the first two or three years, some kind of crop may be profitably raised on the orchard between the rows of trees. When the roots extend so far as to be

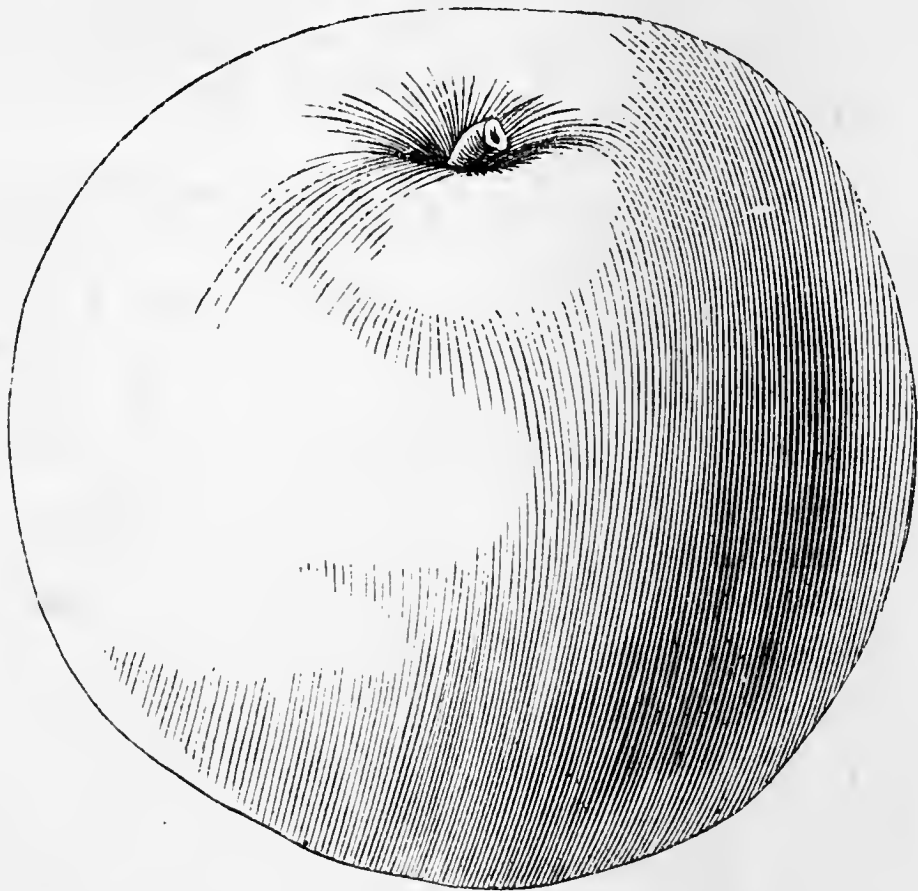
injured by the plough, the cropping of the orchard should cease, or only such things planted as require superficial cultivation. Weeds and grass must be kept down, but deep ploughing would be injurious. A crop of Cow Peas for fodder, or some such shading crop is about the best for the orchard. Small grain, if planted, must not be allowed to mature, as too exhausting.

The two chief insect enemies to the Peach, are the Curculio, which punctures the young fruit, and the Borer Worm, which eats into the bark near the surface. For the former, no effectual remedy has yet been discovered. The Borer Worm operates under the bark near the ground. There is always a gummy exudation around the trunk, which shows its presence. Scrape this away, and with a pointed knife or with a piece of wire inserted, the worm is easily found.

With respect to the orchard for family use, there is very little more to be said, than may be derived from the above directions. The chief object will be to have enough fruit, and of the best varieties, for a continuous supply through the summer. In order to ensure this succession, it is necessary to procure budded or grafted fruit. Very good orchards are kept up by seedlings from the best Peaches, but there is no certainty of having exactly similar fruit to that planted.

When there is irregularity in ripening, much time must be lost in hunting over the orchard for ripe fruit, and the quality can not be relied on as best.

### APPLES.



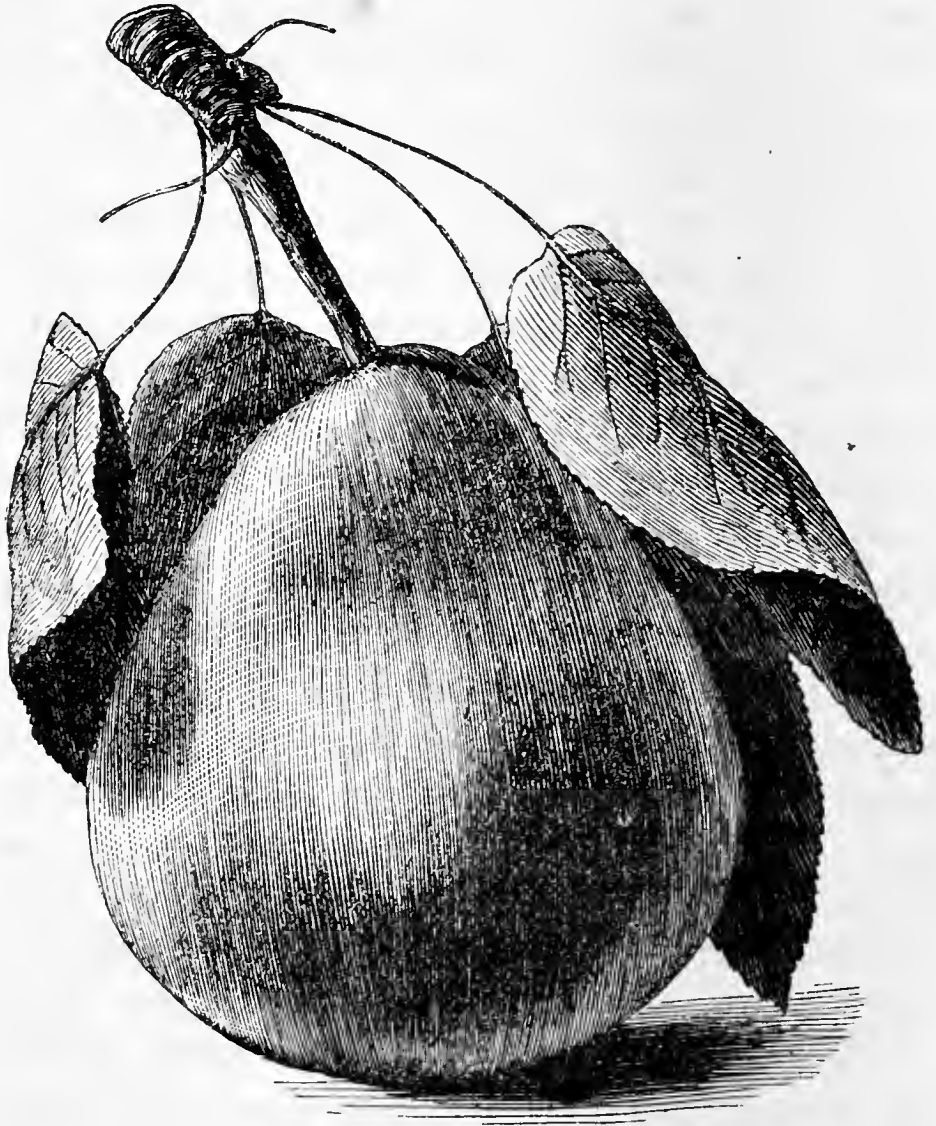
As the Peach is more especially a Southern fruit so the Apple is better adapted to a cooler climate. Along the level, sandy lands of the seaboard, they are not often seen in perfection, but in the middle country, and more particularly towards the

mountains, we have many varieties that compare well with the best Northern Apples. By selecting and preserving the best Southern seedling Apples suited to our latitude, our nurserymen and other Pomologists have procured a succession of good fruit from end of May to Winter ; some varieties keeping well through the Winter, even until the new crop comes in.

The Apple flourishes best on a rather stiff soil, or one in which clay predominates. In order to have good fruit, it is even more necessary than with Peaches, to plant only grafted trees. Apples from the seed, can never be relied on as similar to the parent. For the preparation of the ground and the planting out of the trees the same general directions as given for the Peach will apply. Previous to planting, the young trees should be cut back to about two feet, so as to form the branches at that distance from the ground, and have the trunk shaded. Unlike the Peach in this respect, it has been found from experience that but few of the best Northern Apples are adapted to our climate. Nearly all our good Apples are native ; and we would always advise that these be planted in preference to the Northern varieties. The catalogue contains a large number (all well tried and of best quality,) from which a selection may be made, and we would advise, as with other

fruits, that the selection be left with the nurseryman, to furnish such as are most desirable.

## PEARS.



The Pear is said to be the "most refined and delicate" of all fruit, and has receded further

from the wild original, in habit and quality, than any other. It is, perhaps, owing to this fact that it is affected by that fatal disease—the “Blight,” a sort of vegetable dyspepsia, which more than any other cause prevents its general cultivation. It is curious enough that some sections of country are exempt, but these are comparatively few. It is found North, South, East and West. The cause and nature of the disease, and the proper remedy have given rise to much discussion; and various theories and suggestions have been offered, but as yet there has been no satisfactory solution generally accepted. It is neither *fungus* nor *insect* work, as has been suggested; for they can both be seen and detected, nor is it from freezing of the sap as others say, for it is as common at the South where the sap is not frozen, as any where else. The cause is probably to be found in the peculiar constitution of the Pear, as it is, in its present improved condition, a kind of artificial or unnatural and delicate state, in which the vital powers are in an unstable equilibrium. This of course is not a satisfactory solution, as it only indicates the probable cause without stating the nature of the disease, but it may serve to point in what direction the nature of the disease should be investigated. What would be called “high cultivation,” deep ploughing or spading, so as to injure and disturb

the roots, the excessive application of rich manures and frequent stirring of the earth about the roots, all tend to produce blight. From an experience of twelve or fifteen years, after losing three-fourths of the trees, we would recommend only surface culture, merely enough to keep down weeds and grass, with an annual top dressing of some fertilizer or compost in moderate quantities, lightly dug into the surface.

When the blight appears, the diseased branches should be taken off at once, a little below the line of the disease. Longitudinal incisions with the knife along the trunk and limbs, so as to release the pressure of the bark, have a good effect.

Pears are cultivated both as Standards (those grafted on Pear stocks,) or Dwarfs (when grafted on Quince, Haw, or some other smaller trees.) Nearly all our Dwarf Pears are grafted on the Angers Quince.

The Standard may be planted about twenty feet square; the Dwarf about twelve to fifteen.

The Pear does best on a deep mellow soil; the preparation and planting similar to that for the Peach and Apple.

The pruning must be done to encourage a pyramidal form, training the lower branches, and pinching off shoots and buds which tend to grow out of due proportion.



We have a large number of the finest varieties in the catalogue, suited to our climate, from which a selection may be made; and as was suggested previously, it is well to have the better knowledge and experience of the nurseryman in selecting the best kinds for a succession, or for the seasons when they are most wanted. We have found the following of first quality and well adapted to our climate. Bartlett, Belle Lucrative, Bonne d'Eze, Seckle, (quality best, but a slow grower,) Glout Morceau, Flemish Beauty, Passe Colmar, Duchesse d'Angouleme, Beurre Easter, &c. There are many others equally good and suitable for a collection.

### GRAPES.

We will endeavor to give such general directions for the culture of the vine as may be needed, without going into any extended discussion of the merits of different kinds, or of the various modes of pruning and training. The number of varieties now known and cultivated is enormous, but they can all be referred to a few leading forms or types, which require somewhat different treatment.

The "Foreign Grape," (so called,) those cultivated in the old world, have been repeatedly tried here, and have almost universally failed after a year or two, when grown in the open air. In California, where the climate is much drier, they



succeed well. We cannot recommend them except under glass. The other, "Bunch" or "Cluster" Grapes, of American origin, are mostly of two types, viz: 1st, those descended from the native *Vitis Labrusca*, (as the Isabella, Catawba, &c.,) with larger and loosely disposed berries, thicker skin, more pulp and less juice; and with leaves more or less hoary on the under surface; and

2dly, those descended from *Vitis Æstivalis*, (as the Warren, Black July, Pauline, &c.,) with small berries and more compact clusters, less pulp and more juice, and with leaves not hoary, but rather of a rusty color on the underside.

The *Bullace* or *Vitis Vulpina* is represented by the Scuppernong Flowers, Thomas, and other allied varieties.

## PRUNING AND TRAINING.

The object of pruning the vine is to keep it within bounds, and by reducing the amount of wood, to improve the quality of fruit.

*The Grape bears its fruit on the growing wood of the current season, which wood is the growth from a bud formed the previous season.*

By keeping this fact in view, we shall understand the rationale of the various modes of pruning; and that, however they may differ to suit the fancy of persons or the necessities of the case, they are all referable to one general plan, which may be stated in few words, viz: *To cut off all superfluous wood, and leave only so much of the new growth, (i. e. wood of the previous season,) as will give the largest amount of good fruit with least tax on the plant.*

If the vine were left unpruned, it would soon grow out of reach and become unmanageable, and

there would be a useless expenditure of its vital force on superfluous and non-bearing branches, whilst the fruit would be smaller and of inferior quality.

This is the rationale of all pruning, and it is in the main, correct, but the *amount of pruning* required for different kinds of Grape, is not the same.

It is very well known, for example, that the *Labrusca* varieties, require closer pruning than the Summer Grape (*Æstivatis*.) If too much wood is left on the former, the production of fruit is increased, but at the expense of the vine. It is disposed to overbear. If on the other hand, too little wood is left on the latter, the whole energy of the vine seems to be directed to wood and leafy growth without much fruit. They differ in this respect in their habits, and we treat them accordingly, leaving much more wood on the one than the other. Indeed the Black July and some others of the small Grapes, scarcely need more pruning than merely to shorten in the ends of the twigs, and to take out old declining branches.

Pruning must also vary according to age and vigor of vines. On the older and stronger vines, more bearing wood may be left than on the younger and more feeble.

The pruning, of course, must be done in winter, as soon after the fall of the leaf as possible.

Avoid late pruning, as it causes bleeding, and all Summer pruning is needless, except to pinch off the feeble laterals. Grapes in this latitude need all the shade they can get from the leaves, and are always better when thus protected from the sun. At the North, and in Europe, it is a common practice to strip off some leaves to allow the sun to mature the fruit; here we have too much of it, and the fruit needs screening.

In pruning we must have an eye to the production of new wood, to form bearing branches for another year.

A stout, vigorous cane may be trained to take the place of the old bearing wood. This is known as the *Renewal plan*; or if we prefer the *Permanent stem plan*, the main trunk is allowed to grow and branch, and the bearing wood is formed annually on the branches. This latter mode is always adopted for arbors and trellises, the former is most generally used in stake training.

In planting out vines, whether for a large vineyard or only a few for table use, it is always best to use young vines, one or not over two years old. At the time of planting, the young vines should be cut back to two or three buds, and when they start, all but one should be rubbed off, as soon as they have acquired five or six inches of growth.

At pruning the following winter, the same should be done, as no fruit is expected, and all the power of the plant should be used in forming roots and acquiring strength.

If the growth is good, some fruit may be expected the third year, but the pruning is still close.

Afterwards the general directions as given above should come into practice.

## PREPARATION OF SOIL AND PLANTING.

Little need be said under this head.

The Grape likes a dry, and well drained soil, not too stiff. On poor sandy lands, the fruit is of superior quality, but deficient in quantity. A moderately fertile soil, well supplied with potash, lime and other mineral bases, and phosphoric acid, is perhaps the best for the Grape, and such a soil will yield well and of good quality.

They should be planted in rows about eight feet wide, and five or six feet apart on the row. This is a greater distance than that adopted in Europe and at the North, but has been found necessary from the greater vigor and growth of the vine at the South.

Of the well known varieties in cultivation, the following may be recommended for table use: Concord, Delaware, Diana, Isabella, Iona, Catawba, Warren, Black July and Pauline. For wine-

making, the Scuppernong, Thomas, Flowers and others of that class are generally preferred, as more hardy and prolific, and less liable to rot and mildew. The Scuppernong is also a good table Grape, and the cultivation is so easy, that a few vines should have place around every homestead. As they differ so much in habit from the other Grapes, a few general directions will be given for their treatment :

The arbor or canopy support is the only kind used, as they need no pruning. The young vine when planted, should be trained upright with a clean, straight unbranched stem to about five or six feet in height. For the next year's growth, they should be provided with the arbor, on which to spread out their branches. As the vine continues to grow and increase in size annually, this canopy may be extended. They need no pruning except occasionally, the removal of decaying branches, and taking away all shoots from the main stem. The vines should be well supplied with an annual dressing of rich and well decomposed manures.

## NECTARINES.

This fruit is so similar to the Peach in habit and growth, that the same general direction will apply to both. From its smooth skin, it is more liable to the attacks of the Curculio, and hence it is

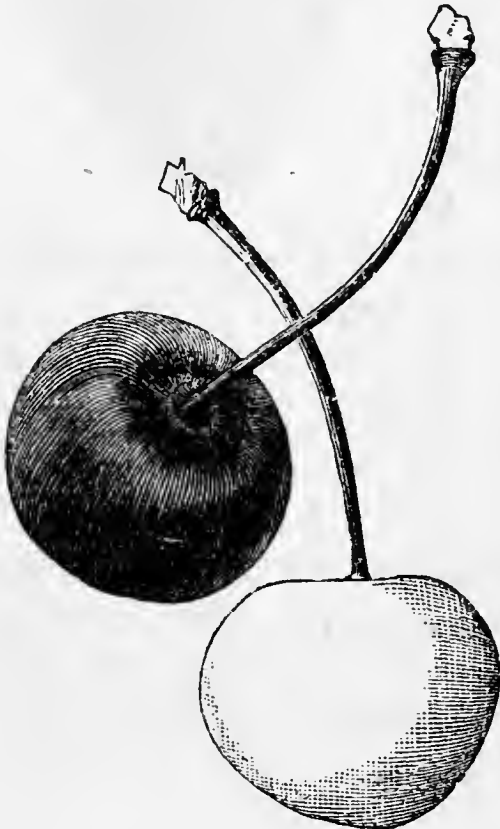
not so generally cultivated. A well ripened Nectarine is a fruit of great beauty, and a few trees may very well have a place in every collection.

### APRICOTS.

This tree blooms so early in our latitude, that most generally the fruit is destroyed by Spring frosts. They do better in the cities and other sheltered places.

It is a delicious fruit, and ripening as it does before the Peach, would be a valuable acquisition, if better adapted to our climate.

### PLUMS AND CHERRIES.



We cannot recommend either of these fruits for general cultivation, along the middle and sea bound region of the Southern States. They seem better adapted to a Northern climate, and rarely make vigorous or healthy trees at the South, except along the mountain region.

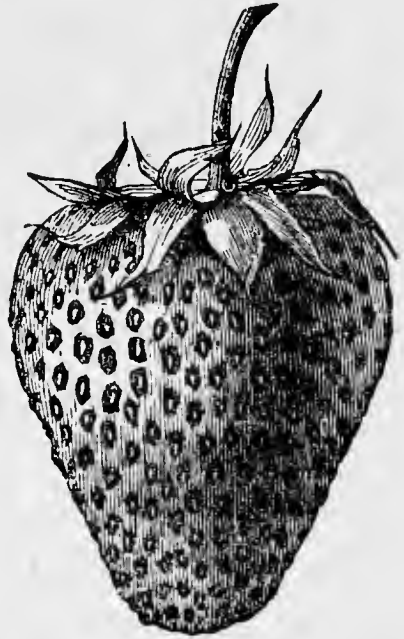
There are some very good varieties of native Plums which are



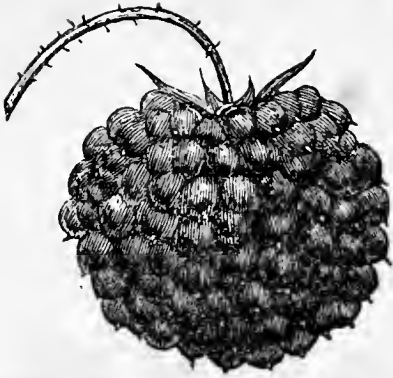
worth cultivation, but they do not compare in size or beauty with the old improved kinds.

## STRAWBERRIES.

This universal favorite finds a genial home at the South, and large quantities are planted both for the Northern and home markets, and for private use. Of the many superior varieties in cultivation in Europe and the North, there are several that seem more specially adapted to our climate; of these *Wilson's Albany* still continues to hold a first rank as a table or marketable fruit. *Longworth's Prolific*, *Agriculturist*, *Triomphe de Gand* and *Kentucky*, (a new variety,) are also of first quality, prolific and hardy. Plants should be set out about eighteen inches square, so as to allow free space for the hoe. A mulching with straw or leaves in Spring, after the shoots appear, will give a longer bearing season. Keep down all weeds and grass through the Summer, and also the runners should be cut, unless wanted for sets to be planted out another year.



## RASPBERRIES.



This fruit is not so generally cultivated here as further North, as there are but few of the really fine varieties that can stand our hot summers.

*Doolittles Black Cap*, *Imperial Red* and *Philadelphia*, seem to be hardy enough, and deserve a place in the garden. They require a deep, rich soil. Plants should be set about four feet square, and tied to some support. After the fruit has all matured, cut away the old fruit bearing canes, so that the young canes may grow more freely. In the Winter, cut back about one-third of the cane, and tie up to the stakes.

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